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ABSTRACT

A classroom ethnographic study of the uses of sound was conducted in church- and state-sponsored kindergartens in Haifa, Israel, and Konstanz, West Germany. Three German and four Israeli classes were selected for systematic study. Structured observations were made of class activities, the uses of space, and salient movements in the classroom. Attention was given to glosses teachers applied to activities and to the functions of talk in the kindergarten. Observations were analyzed along several dimensions, including the impact of control through sound and the effects of sound used to establish routines or to provide opportunities for creativity. Findings indicated that the most urgent use of sound in the kindergarten was the creation of talk. Different approaches to talk in the two cities were found, and each teacher's sound profile was revealed to be idiosyncratic. Paralinguistic sounds were also found to be significant to the ongoing context of the kindergarten. Music making was shown to be modeled in the kindergarten as a synchronized, intentional, and entirely predictable way of using sound, with the activity of making music and the sounds of music serving the kindergarten teacher as a covert means of control. The reality structured by sound in the kindergarten is discussed, and a description of data coding and scoring procedures is appended. (RH)

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THE SOUNDS AND THE MUSIC: PHENOMENA OF CREATIVITY AND ROUTINE IN THE KINDERGARTEN

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THE SOUNDS AND THE MUSIC: PHENOMENA OF CREATIVITY AND ROUTINE IN THE KINDERDARTEN[1]

Abstract

Berger and Luckmann (1972) view language as the primary mechanism of socialization and acculturation. Since language can be thought of as a fairly specific if comprehensive "sedimentation" of the sound environment, it is more efficient to consider that the total sound environment and the distribution of component sounds "do socialization". By focusing on communication, talk, music, and white noise, it is possible to show some of the finer mechanisms at play. In a study of the thematization of sounds in kindergartens in one town in West Germany and in one city in Israel, we found that music is a theme of major importance and a somewhat paradoxical phenomenon. Generally taken to refer to the autonomous elaboration of sound patterns, music is taught as a limitation on the creative use of sound. But as a paradigmatic age-group experience, music contributes to the formation of a peer culture. And the group, implementing pre-verbal mechanisms, asserts its creative impulse in characteristic patterns of sounding. CULTURE TRANSMISSION, CLASSROOM ETHNOGRAPHY.

Introduction

> Sounds, whether or not articulated as words, are accountable, because they are carried on under the auspices of, and are made to happen as, events in the same ordinary affairs that in organizing, they describe. (Garfinkel, 1967)

The premise that language is the governing mechanism of socialization (Berger and Luckmann, 1972) implies that concepts are of supreme importance in shaping the world of experience and in channeling perception. A further implication is that the welter of sounds-to-be-perceived that characterize every situated event has a unique status.

Sounds are stipulated to be relevant or not, meaningful or not, language, or noise, or tone, or music. These stipulations are socioculturally conceived and constructed in thematizing experiences.

In our field studies of socialization in kindergartens in Israel and in Germany (Kalekin-Fishman, 1980), we found that the uses of sound are integral to the management of reality. We found differences in the careers of sounds in kindergartens of each city, but we also found some surprising similarities in the ways in which stratification by age is established through the use of sound.

The study began with unsystematic observations in ten kindergartens in Konstanz (West Germany) and in twenty kindergartens in Haifa. Each observation period lasted an hour or two, and I visited the kindergarten on various days of the week. When I

felt that I had acquired a fairly clear idea of what the kindergarten programs were, I asked supervisors in each city to recommend kindergartens for more intensive observations. In Konstanz I observed in three kindergartens, each belonging to a different sponsor, and each located in a different neighborhood. The Catholic kindergarten is located in a traditional working class area, the Lutheran kindergarten is located in a new housing project where young families and immigrant worker families find accommodations, and the municipality-owned kindergarten is located in a middle-class suburb. In the Haifa area I observed one Arab kindergarten, one state-religious kindergarten in a middle-class neighborhood and two state kindergartens - one in a lower class neighborhood with many relatively new immigrants, and one in a middle class neighborhood.

I spent three complete "ordinary", middle-of-the-week days in each kindergarten making structured observations of the activities of the class, the uses of space, and the kinds of movements that were salient. In addition, I made note of the glosses used by the teacher for the activities, and the functions of kindergarten talk. These observations were made at five minute intervals where, from a perch at the main entrance, I observed each quarter of the classroom in a clockwise direction.[2] At the same time, I tape-recorded what was going on. The observations were analyzed along several dimensions. In this paper I will explore the impact of control through sound, and the effects of the uses

of sound to establish routines, or to provide opportunities for creativity.

Since one of the reasons for undertaking this study was to confront a single researcher with a certain kind of reality, the possibility of using machine analysis or of recruiting teams of listener-coders was ruled out from the first. The analysis had to be limited, therefore, to a few of the significant moments of the daily routine. We chose to relate to the beginning of the session, its ending, and part of the "play" or "work" period. Conclusions are based on an analysis of how sounds are generally made and interpreted in the identifying actions of the kindergarten setting; and on highly detailed analysis of characteristic sound qualities.* Apart from the differences in terminology, we were able to find both distinct ways of constructing sounds in the kindergartens of the two cities and some surprising similarities.

Routine Patterns of Sound

Kindergarten sound practices, their availability, the circumstances of their use, their variation according to topics and the labels applicable in context, account for each kindergarten activity, and also map "rules for the routine grounds," of kindergarten life.

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*For details of analytic procedures, cf. APPENDIX.

The most urgent use of sound in the kindergarten is the creation of talk. There are different approaches to talk in the two cities.

In Konstanz, the teacher's voice is rarely heard above the general sound. Explanations are generally given to small groups of children who approach the table at which the teacher is busy. The teacher often speaks to other adults in the building and sometimes enters the office to carry on telephone conversations. Children talk mostly to each other. The teacher almost never interposes her own suggestions when the child is busy; nor does she interfere with the children's physical play.

In Haifa, most of the teacher's talk is addressed to children. Throughout the morning, teachers question, give information, instructions, directions, suggestions, encouragement; they praise, explain to, read to, exhort, scold, judge, call to and cue children.

Each teacher's sound-profiles are apparently idiosyncratic. Using summary scores, however, we could point to group patterns. There is, for example, a range of silence which is typical of the teachers observed in each city. Characteristic of the teachers in Konstanz is silence during approximately fifteen percent (15%) of the sampled time; one teacher was silent for as much as forty-five percent (45%) of the sampled time. In Haifa, the teachers were unheard during at most two percent (2%) of the sampled time (Kalekin-Fishman, 1980: 96).

Both in Konstanz and in Haifa, children are cued to silence during collective activities, but unless the teacher is explicitly lecturing, or reading aloud, there is usually an undercurrent of children's talk that is persistent even if muted.

Paralinguistic sounds are significant to the ongoing context of the kindergarten in both cities. In different activities, children emit widely varied sounds. Relating to the objects with which they play, children hum, sing, imitate a chugging train, a car horn, a dog, a cowboy, a baby. When running, jumping, somersaulting, pushing, children shout, whistle, laugh, growl, or make declarations in loud heavy accents. Barking, grunting, shouting, are characteristic of Freiespiel, which is the gloss of children's activity in Konstanz, but play with fixed equipment in a given corner may enforce a specific kind of sound. The building block area, for example, enforces both the clicking of wood and consultations on what's and how's of building.

Children in Haifa "work" for part of the morning at assigned tasks allocated to routinely equipped tables or corners and perform with routine adaptive sounds. Later on, they are released for play, let out to the yard to which they run with whoops and shouts before deciding on how to play. The structuring of sound is erratic and of variable salience in play.

Of the non-vocal sounds heard in the kindergarten, some are produced as accompaniments to the voice and some have independent functions. Teachers may intentionally make use of a non-routine sound to arouse the children's attention. Children who are playing may intentionally move, clank, bang objects and furniture. Some contacts with objects lead inevitably to certain kinds of sounds. Pushing a cart on wooden wheels is one example; eating from plates is another.

Object sounds are primarily related to the design of the kindergarten classroom and the distribution of equipment in it. In each city, there is a typical location for kindergartens. The impact of externally-generated object sounds (planes, buses, shopping) is far more important in the Haifa kindergartens which are set up in the centers of neighborhoods than in the Konstanz classrooms observed. These are set back from the streets in areas off the beaten track of urban business. The salience of object sounds is patterned similarly in all the Haifa kindergartens. But in Konstanz, the kindergartens are planned differently by different supervising bodies and the daily schedule is intentionally open to change. The object sounds are accordingly salient to different degrees. In some kindergartens object sound is not salient at all in the time-sample analyzed; in others it is salient in as many as seventy percent of the samples (Kalekin-Fishman, 1980: 98).

The sounds of all the actors are moderated by the distribution of kindergarten activities. Actors' idiosyncrasies in sound-patterning are most evident when many activities are in train, when the kindergarten class is divided into smaller groups for "free play" or "work." Uniformities, on the other hand, are most evident when activities are coordinated.

Teachers in both cities, even those that seem retiring in the course of most of the day, all dominate coordinated activities with

their voices. Object sounds generated in the kindergarten are silenced during coordinated activities. The sounds made by the teacher's helper, cleaning up after the children's "work" or preparing for the next activity on the schedule, are treated as non-sounds, except when they are perceived to be a disturbance, and the teacher requests quiet.

Inappropriate sounds may be ignored, i.e., become non-sounds, or they are assigned to "noise". The teacher glosses sounds judged appropriate to a curriculum topic by connecting them to a given activity. This is laying the groundwork for themes that will presumably be important in school (Schutz, 1970).

Music, a Differentiated Theme

Music is one such theme. It has a variety of references. Instruments are played, rhythmics performed, dances practiced. As a kindergarten category, "music" usually includes singing. The songs that were recorded in connection with this research are well-formed melodies of standard length with conventional beginnings and endings, with words that suit, or word-configurations that seem to dictate, the rhythm and meter.

Topics are similar in the songs sung in German and in Hebrew. The songs in all the kindergartens have words about greetings, about nature, and about what people do (wandering from place to place), or work at(building, cleaning). In religious kindergartens, however,

there is emphasis on regularly singing prayers. During holiday seasons, the meaning of the holiday and its customs are the topics of songs - and the reason for singing.

Songs are also used to mark the change from one activity to another. They signal the attention and the cooperation of all those present.

In Konstanz kindergartens, the teacher leaves singing as a collective obligation for the end of the day which lasts three hours, at the most. In the Haifa kindergartens,singing usually is part of all three collective activities that take place in the course of the five-hour day.

Singing is not, however, restricted only to the activity of the collective circle. In some kindergartens, it is used to make unpleasant activities, like cleaning-up, palatable. Throughout the morning, singing is done sporadically as 'added on' sound, usually on the children's initiative. Children sing snatches of songs recently taught or revised by the kindergarten teacher. They sing songs to lull a doll to sleep, or to celebrate the doll's birthday. They shout in exact pitch and laugh in descending staccato runs. They make the sounds of driving a car, imitating the pitches intentionally, or sing like a cowboy riding a horse, and they imitate animals in song. Spurts of exact pitch with regular meter characterize formulae of normal speech. The teachers make extensive use of information formulae. Opening and closing greetings are intoned in certain ways. Announcements heralding changes in activities ("Clean-up!" "Ten more minutes!") alert the kindergarten class to

expected changes in the qualities of the general sound as well. Greetings, blessings, familiar instructions, and calling a child to attention are in fact turns of melody.

Objects are also sources of music, emitting rhythmic melodies (total music) or rhythmic patterns (partial music). Melodic instruments are used to accompany songs, and percussion instruments (including hand claps) provide a rhythmic basis for synchronized movement in calisthenics or rhythmics. Children pound tables in regular rhythm, click small building blocks in patterns and stamp their feet, adding a musical event to the context of a glossed activity. Children often spontaneously sing intended pitches with or without a regular pulse, using syllables or nonsense words, and fitting rhythmic articulation, meter and tempo to the context being imitated.

When singing begins spontaneously, teachers and children organize themselves in an ad hoc synchronization of sounds and movement. Object sounds disappear when singing is going on, unless instruments are being used. The kindergarten teacher's voice is softer and less dominating in singing that is done either spontaneously or in a collective activity, than it is in speech (Kalekin-Fishman, 1980, App. G). In a very important sense, songs are uncontrollable either by teachers or children. They establish final boundaries of silence and shape the bounded sounds irrevocably.

Though programmed differently in the two cities in which I observed, music-making is modeled in the kindergarten as a synchronized, intentional, and entirely predictable way of using sound. In fact, the

activity of making music, and the sounds of music serve the kindergarten teacher as a covert means of control.

Music, however, is not unambiguous evidence that the teacher is exercising control. Songs are imposed on the teacher just as she imposes them on the children.

These songs are transmitted in music lessons at teachers' seminaries, published in books for children, and included in guides for teachers. Every song, even one about a joke, is taught to be sung with exact words, on exact pitch, and in correct rhythm, as well as in a coordinated 'sound-profile'.

Sound defined as music dominates both the teacher who is responsible for accurately transferring it, and the children who reproduce it. But the children are not completely cowed!

Children's voices are occasionally expressly silenced, but in general are stable in quality even when synchronized from time to time by signals from the teacher. Children's singing is characterized by a kind of "tempo franco," a uniform pacing that does not change when the songs' moods change. Even when the voice-quality (sound-profile) of the teacher and objects changed radically in singing, children's sound profiles changed almost not at all. In all the kindergarten days observed, the children's sounds are the most persistent throughout the day and the most consistent in their configuration of sound-qualities. In both cities this is true of kindergartens sponsored by religious or non-religious auspices; of kindergartens with children from populations that differ in S-E-S.

The Reality Structured by Sound in the Kindergarten

The children's implicit biological resource of time, is overtly regulated by the explicit interpretative decisions of the kindergarten teacher. Through framing activities and their sounds in time, the teacher formulates a lawfulness that defines "being a kindergarten child." The "kindergarten child" does a certain range of things at certain times, in a certain order, with certain objects, on the same level with certain people, and subordinate to others. The teacher establishes criteria for doling out privileges (playing in the doll-corner, being monitor, having a drawing hung on display) and thus defines what privileges are, and what the routines of mere duty. In doing so, she hierarchizes activities and their conceptualizations, adumbrating thematic preferences that will be elaborated on in the schools. But simultaneously, the meta-significance of being an age-group is determined as belonging to a hierarchized category, and participating in category-bound activities that can, may, should, or must be carried out. All of these processes are traced in contours of sound.

Making music is located in all the kindergartens as a paradigmatic experience. It consists of a nexus of activities which, while enabling the kindergarten teacher to exercise strong subtle control, paradoxically undermines her authority. For the fact that music is a specialized kindergarten activity structures a conception to be compared and contrasted with other thematic uses of music: broadcasts, lullabies, family get-

togethers. What is called music in the kindergarten constitutes only a small proportion of the music to which a child is exposed. And this raises both the cognitive issue of group schemata as bases for theme definition and the social issue of group identity.

Furthermore, music is only one specific 'crystallization' of sound, and a very small proportion of the sounds heard in the kindergarten during the average kindergarten day. A closer look at the sonal milieu which is created by intense peer interaction and usually dismissed as "white noise," can shed some light on the exercise of control. Despite its surface uniformity, the complex mélange of activity, spatial distribution, movement and the constant novelty of detail, cause this sound to be the most memorable and "imageable" of the kindergarten setting (Lynch, 1972; Stokols and Shumaker, 1981).

Our investigations show, it is true, that the teachers' patterning of sound configuration is in the main idiosyncratic. This may be taken as evidence of teacher control. It is, therefore, reasonable to expect that children's sounds would vary in accord with the specific rules the teacher follows, or in accord with the principles that underlie her performance. After all, the routine recurrence of differentiated patterns constitutes the kindergarten day. Success in 'doing socialization' should be indicated by the teachers' success in impressing idiosyncratic patterns on their classes including the patterns of sounding. There is ethnographic evidence that teachers do not enjoy complete success (Richards, 1974; Mehan, 1981). In our analyses we found that when

teachers impose structured constraints, the children counterpose their own soundings, counterconstraints on the teacher. Even without meaning to, teachers adjust their sounds to those of the insistent kindergarten peer group.

The kindergarten teacher's control is rarely put in question on the verbal level. It is, however, continually resisted. Control exercised by the kindergarten teachers observed is reviewed and countermanded through the children's practices in ways which do not reach the level of the articulation of nomenclature, or axioms or principles, but do include the translation of transcendental values into structures of sound (Berger and Luckmann, 1972). The children insist on their autonomy in the face of the demand for conformity to preconceived pattern, which is the legal and professional mandate of the teacher. Kindergarten children as a group create contexts of perception that are vital to their own energetic interests.

If similar dialectic processes are characteristic of other sensory structures, socialization can be defined as a constant dynamic of negotiation for the revision of perceptions, and hence of the conceptualizations of themes.

This may be a viable interpretation of the fact that socialization is never either final or unambiguous. Alternative programs of socialization apparently make available alternative channels for creativity and provide varieties opportunities for ringing changes in thematic relevances.

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APPENDIX

Analytic procedures: Coding and Scoring

Using a stopwatch I listened to sound recorded in the kindergarten for fifteen seconds and categorized discernible sounds of three sonal actors: the children, the kindergarten teacher, and, a residual category, "objects," which includes all sounds that are not articulated by people in the kindergarten classroom. This category includes sounds such as banging of toys, the playing of instruments, the patter of running, as well as sounds of any kind that penetrated the kindergarten from outside. Changes during the fifteen seconds were also noted.

For each category I analyzed the sounds heard during each fifteen-second interval in order to derive scores for music (MUSIC), for the sound-traits and the overall configurations (GES), and for the structure-input or output. To check for bias, I asked a music student to score the first five minutes of each sample tape. Interrater reliability was .84

Separate profiles were summarized for kindergarten teacher, children, and objects (Figure V). The categories in these profiles were chosen for their relevance to music (Tovey, 1966) and t. language prosody (Crystal, 1969) as well as in consideration of their accessibility, that is, the fact that (a) they can be noted by a single researcher and, (b) they can be validated relatively easily. Number scores for individual sound traits designated an order of salience on each of the trait

dimensions. A score that summarizes the salience of traits (GES) provides a characteristic sound for each of the kindergarten actor-groups.

For every fifteen-second interval I scored each actor-group in register (high = 2, low = 1), range (wide = 2, narrow = 1), tempo (fast = 2, slow = 1), dynamics (loud = 2, soft = 1), and agogics (staccato = 2, legato = 1) as well as the quality (group = 2, solo = 1). In addition, I noted whether the quantity of sound emitted by children, teacher, and objects was much (2) or little (1) during the interval. Zero (0) was scored only to denote silence in one or more categories. Obviously zero (0) quantity involves zero-scores for all the sound-characteristics. Where several kinds of sounds were heard with in a single period, the score was an average of the noted values. Summarizing scores for sound-profiles (GES), designating overall levels of sound-saliency were calculated by summing the scores of the various characteristics and multiplying the sum by the score for quantity.

GESTALT = QUANTITY (Quality + Register + Range + Tempo + Dynamics + Attack)

Music was scored in terms of the exactness, or intention of pitch (exact = 1, inexact = 0), and the regularity of rhythm (regular = 1, irregular = 0). Summarizing scores for music, therefore, ranged from two for "total" music to zero for total non-music. Obviously music could

be scored, zero, when non-musical sound was audible (Figure I).

Constructs of structure (which is beyond the children's control, cf. Adams, 1975) were scored in terms of the sound input of the kindergarten teacher and of the residual "objects" category. The kindergarten teacher exercises control when she demonstrates her expertise in dealing with relevant kindergarten topics (relevant = 1, irrelevant = 0), when she sanctions the children by direct appeals (direct appeal = 1, no direct appeal = 0), and when she imposes herself as a frame of reference (imposition = 1, no imposition =0) by dominating the welter of kindergarten sound (Raven, 1974). The construct RAI is the sum of the scores for the teacher's thematic use of sound.

A repetition of the same sound configuration (GES) in a succession of fifteen-second intervals was scored as 'rigid' and a phenomenon of overt control. Thus, scores for the construct RAI range from zero (0) to four (4) for each fifteen-second sound event (Figure III).

The "object" sounds are similarly scored for the degree to which they can be controlled by the children. Sounds are not controllable when they are relevant to the curriculum (relevant = 1, irrelevant =0), when they are not generated by children (non-child = 1, child =0), when they are heard from outside the kindergarten (outside = 1, inside = 0), and when they are repeated over a succession of fifteen-second intervals (rigid = 1, flexible = 0). Thus, scores for the construct RSE range from zero (0) to four (4) for each fifteen-second sound event (Figure IV).

The construct ASM was derived from the visual observations as a measure of synchronization, the structural output achieved in the kindergarten class. The three variables considered are the activity as defined by the kindergarten teacher, (collective = 1, individual = 0), the spacing permitted (limited = 1, unlimited = 0) and the types of movement (coordinated = 1, uncoordinated = 0). Highest structure is attained when the children are assigned to a collective activity, gathered in a limited space, and have their movements coordinated. Thus, the output construct ASM ranges in value from zero (0) to three (3) (Figure II).

An example of the coded data is shown in Figure V. (There is no collective coordinated activity.)

Figure I: Facets of Music/Non-Music (MUSIC)

Score	Pitch	Rhythm	Score Per Event
(1)	Exact	Regular	2
			⋮
(0)	Inexact	Irregular	0

Figure II: Facets of Structure/Non-Structure in the Children's Output (ASM)

Score	Activity	Spacing	Movement	Score Per Event
(1)	Collective	Limited	Coordinated	3
				⋮
(0)	Non-Collective	Unlimited	Incoordinated	0

Figure III: Facets of Overt/Covert Control in the Teacher's Input (RAI)

[(Score)	Control]	Curriculum[2] Relevance	Appeals[3]	Imposition[4] of Self	Configuration[4]	Score Per Event
(1)	Overt]	Relevant	Direct	Audible[1]	Rigid	4
(0)	Covert]	Irrelevant	Indirect	Inaudible	Flexible	0

1. Audible above children's sounds.
2. Refers to exertion of 'expert power'.
3. Refers to exertion of 'sanction power.
4. Refers to exertion of 'referent power' (Raven, 1974).

Figure IV: Facets of Intentional/Non-Intentional Control in the "Object" Input (RSE)

(Score)	Children's Control	Curriculum Revelance	Source	Ecology	Configuration	Score Per Event
(1)	Structure (uncontrollable)	Relevant	Non-child	Outside	Rigid	4
(0)	Non-Structure (controllable)	Irrelevant	Child	Inside	Flexible	0

Figure V: Sample of Data: Encoded Observations of Sounds

Note: Each column represents fifteen seconds, the unit of collection and analysis, all together three and a quarter minutes of encoded sound.

Litz.	20/II/76	Tape II [4(259-299)]*
Children	Activity	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Spacing	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Movement	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Pitch	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Rhythm	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Quantity	1 2 2 2 2 2 2 2 2 2 2 1 2
	Quality	1 2 1 1 1 1 1 1 1 1 1 1 1
	Register	2 2 2 2 2 2 2 2 2 2 2 2 2
	Range	1 1 1 2 2 2 2 2 2 2 2 1 1
	Tempo	1 2 1 2 2 2 2 2 2 2 2 1 1
	Dynamics	1 1 1 1 1 1 2 1 2 2 1 1 1
	Attack	1 1 1 1 1 1 1 1 1 1 1 1 1
Kindergarten Teacher	Relevance	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Appeal	0 0 0 1 1 0 0 0 1 1 1 0 0 0 1 1
	Imposition	0 0 1 0 0 0 0 0 0 1 1 0 0 0 0 1
	Pitch	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Rhythm	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Quantity	0 1 0 1 0 0 0 1 2 0 1 0 1
	Quality	0 1 0 1 0 0 0 1 1 0 1 0 1
	Register	0 1 0 1 0 0 0 1 1 0 1 0 1
	Range	0 1 0 1 0 0 0 1 1 0 1 0 1
	Tempo	0 1 0 1 0 0 0 1 1 0 1 0 1
	Dynamics	0 1 0 1 0 0 0 1 1 0 1 0 1
	Attack	0 1 0 1 0 0 0 1 1 0 1 0 1
Objects	Relevance	1 1 1 0 1 0 0 1 0 1 0 1 0 1 0 1
	Source	1 1 1 1 1 1 1 1 1 1 1 0 0 0
	Ecology	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Pitch	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Rhythm	0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Quantity	2 2 2 1 2 1 2 2 2 1 2 1 1
	Quality	1 1 1 1 1 1 1 1 1 1 1 1 1
	Register	1 1 1 1 1 1 1 1 1 1 1 1 1
	Range	1 1 1 1 1 1 1 1 1 1 1 1 1
	Tempo	1 1 1 1 1 1 1 1 1 1 1 1 1
	Dynamics	2 2 2 2 2 2 2 2 2 2 2 2 2
	Attack	2 2 2 2 1 2 2 2 2 1 2 1 2 2

* This is the source on the recorded tapes.

End notes

1. This research was funded by the DAAD in West Germany and The Henry Weiler Fund in Israel. I wish to thank Professors Thomas Luckmann and Simon Dinitz for their helpful comments on an earlier version of this paper.

2. This is the form of the Final Observation Schedule.

Time[1]	Activity[2]		Spacing[3]		Kinds of Movement[4]		Glosses of Sounds[5]	
	K.T.[a]	Children[a]	K.T.[a]	Children[a]	K.T[a]	Children[a]	K.T.[a]	Children[a]

a. Separate notation for kindergarten teacher and for children.

1. Time: noted every five minutes; observations of the room's four quarters in clockwise direction.
2. Activity: name noted according to kindergarten teacher's designation.
3. Spacing: by quarter number and by table number.
4. Kinds of movement in words; walking, rocking, etc.
5. Sounds noted in verbal categories: crying, greeting, explaining, scolding, and so on, so as to sum up the purport of the communication.